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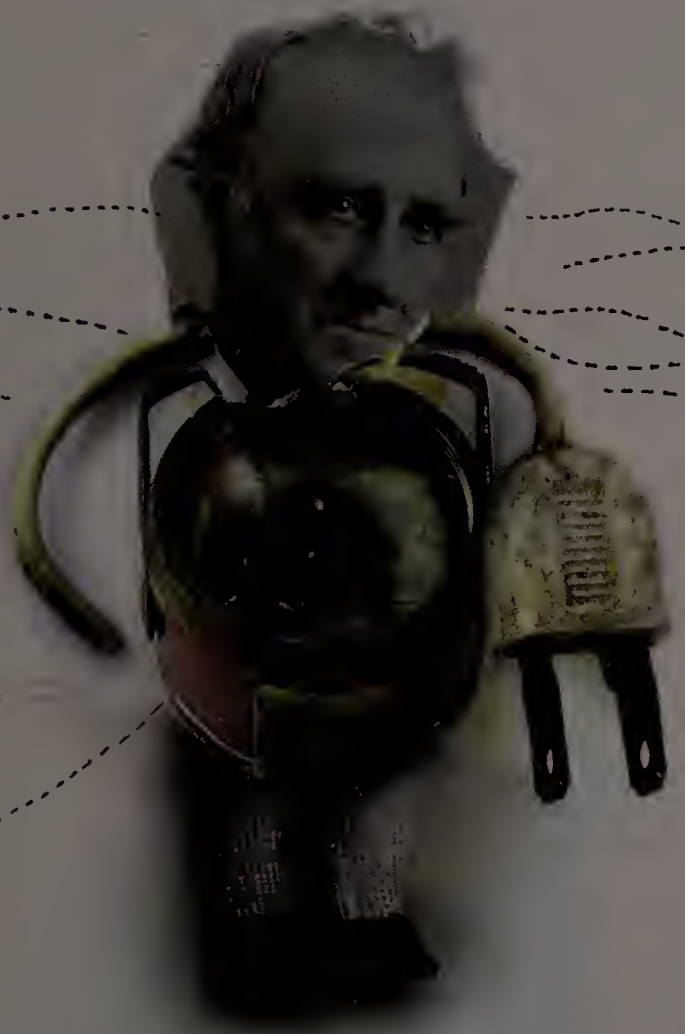

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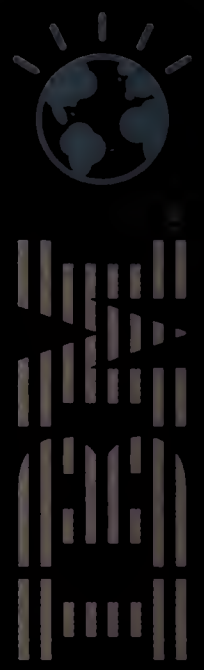

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COVER STORY

IT's Age Problem

18 IT workers over 50, or even 40, are having a tougher time staying fully employed than their younger colleagues are. Is it age bias or something more complex?

When Cybercriminals Attack

26 Watch out for new cyberattacks that turn smartphones into spam bots, shut off electricity to homes and businesses, jam GPS signals and more.

Off to a Fast Start

30 There's heightened interest in agile BI, a rapid development methodology for creating BI systems. The aim is to get end users involved early and often – and thereby save time and effort.

HEADS UP | **4** Floods in Thailand have hurt **hard disk drive** production. | IBM mainframes will soon be able to manage **Windows apps.** | **6** Success is elusive in **social media** marketing. | Beware of **cyberspies.**

NEWS ANALYSIS
8 Hadoop is ready for enterprise use. | **10** Users and analysts offer tips on **negotiating with SAP.**

OPINIONS | **16 Thornton May** thinks IT needs better connections with the board of directors. | **34 Bart Perkins** has advice for making sure project plans are realistic. | **40 John Halamka** says the metrics of CIO success are much different than they were 15 years ago.

DEPARTMENTS
12 The Grill: Campbell Soup CIO Joseph Spagnoletti | **33 Security Manager's Journal:** Sensitive company data, in the wild | **36 Career Watch** | **39 Shark Tank**

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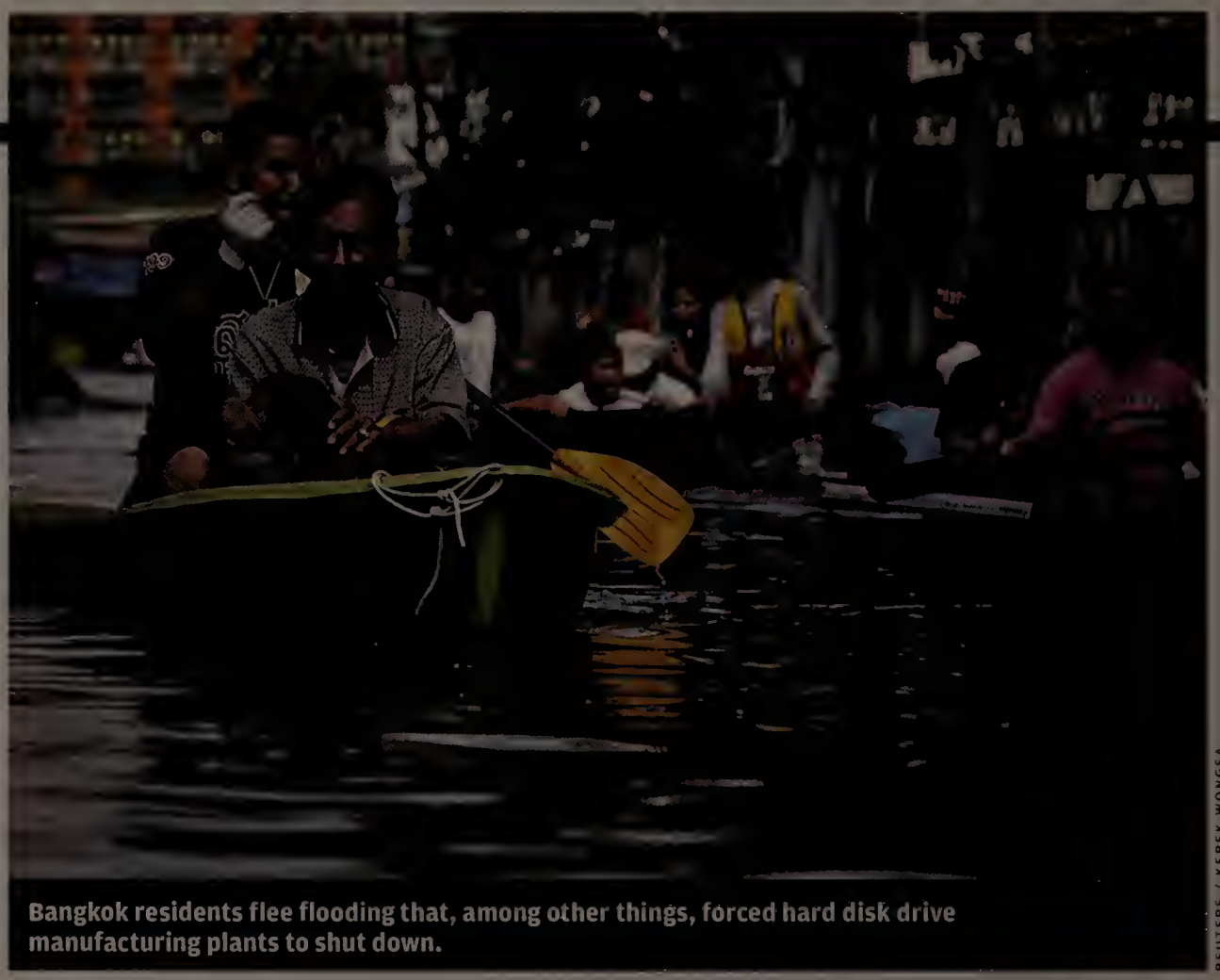
HeadsUp



REUTERS / KEREK WONGSA

Bangkok residents flee flooding that, among other things, forced hard disk drive manufacturing plants to shut down.

THAILAND FLOOD

Consumers Face Hard Drive Price Hikes

FLOODS IN THAILAND are wreaking havoc on manufacturers of hard disk drives.

While HDD vendors are expected to keep computer makers — their largest customers — supplied with inventory, the consumer retail market is likely to be hit by shortages and price increases, analysts said.

Two research firms, IHS iSuppli and IDC, have predicted that the overall shortage due to the flooding will reach 25% to 28% over the next six months.

Western Digital, the largest hard drive producer, will likely be hurt the most: IDC predicted that up to 75% of its production lines will be temporarily shut down. Western Digital and Toshiba have already announced temporary shutdowns of their Thailand factories.

For its part, iSuppli said fourth-quarter hard drive shipments will drop by 28%, to 125 million units, from 173 million units in the third quarter.

Consumers should expect fourth-quarter prices to be at least 30% higher than third-quarter prices.

"You'll start to see PC makers increase prices for some products," said John Rydning, an IDC analyst. "So, indirectly, consumers will face some higher prices because of higher HDD prices."

Prices on retail sites have already risen — and in some cases even doubled.

Analysts predicted that the HDD component in shortest supply will be the slider; it's the block onto which the record and playback mechanism is mounted.

– Lucas Mearian

DATA CENTERS

Better Windows Support Due on IBM Mainframes

IBM mainframes will soon be able to manage Windows applications, bridging one of the last major divides in data centers.

IBM had already announced that it intended to deliver that capability with its zEnterprise 196 mainframe, but it recently said the Windows management function will be available on Dec. 16.

There are many Windows-based applications, including ones made by IBM, inside most data centers; they typically interact with mainframes to access data. Historically, all Windows software has had to be managed separately.

But now, IBM has promised, the security and speed of mainframe environments that include Windows systems will be improved. It will be possible to connect systems on a private network, thus avoiding some network hops and enabling the use of integrated management tools.

Joe Clabby, an analyst at Clabby Analytics, said the new features should reduce the labor required to run mainframe environments that have multiple operating systems. Moreover, he added, "if you can manage this as a single architecture, it saves money."

Greg Lotko, business line executive in IBM's System z division, said the addition of Windows support "is really recognizing that the world is heterogeneous."

– PATRICK THIBODEAU

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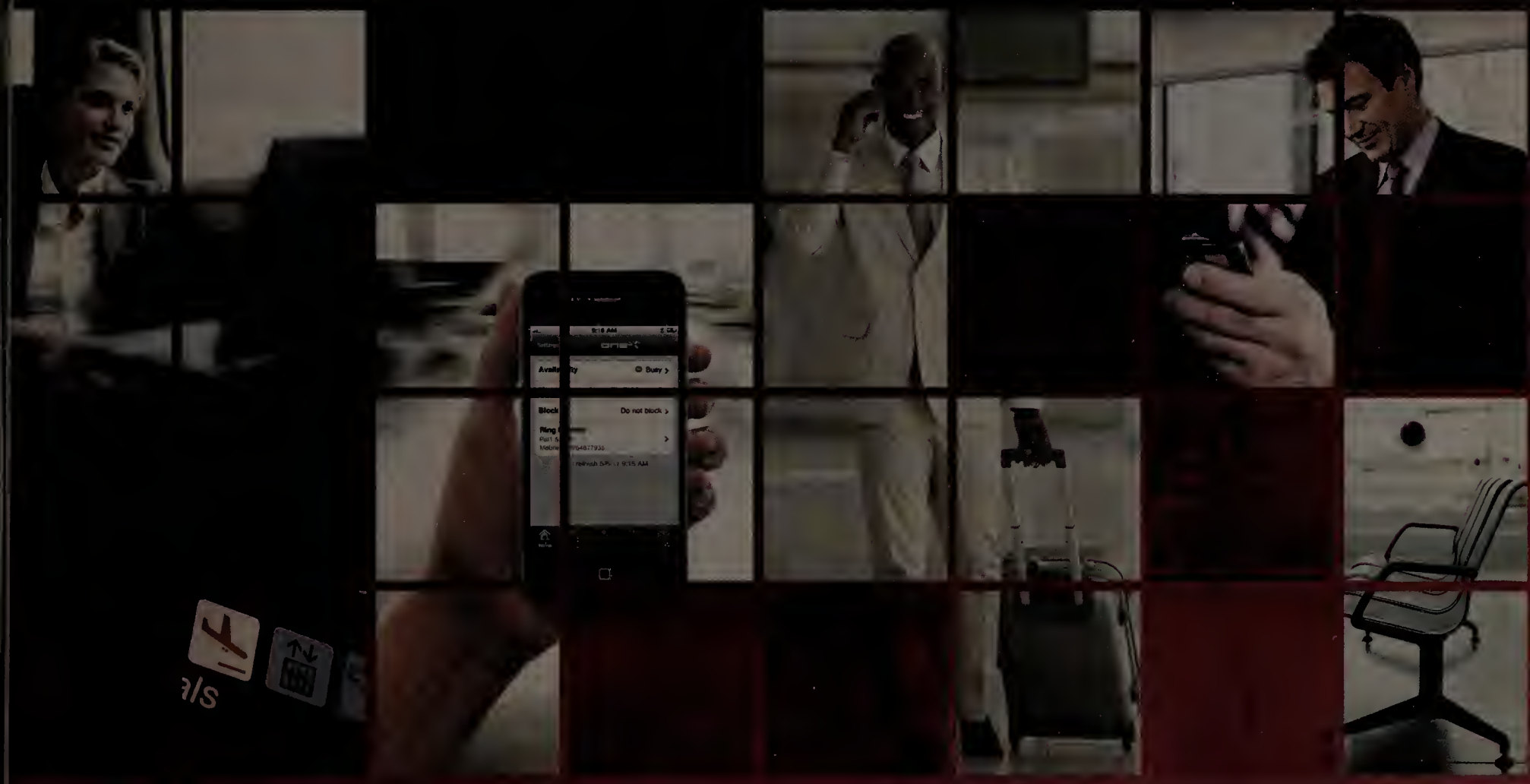

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BETWEEN THE LINES
By John Klossner

WEB 2.0

Social Media Success Is Still Elusive

IT'S CLEAR that companies are using social networks to connect with customers. Less clear, though, is what *success* means in this new media and how businesses can achieve it.

That was a hot topic at the recent Seattle Interactive Conference.

"We haven't seen a lot of 'R' in the ROI," said David Camp, head of marketing for AmazonWireless, Amazon's site for sales of cellphones and service plans. He was referring specifically to financial returns.

But Kim Johnston, vice president of marketing at Parallels, said she sees good returns — although not necessarily the type Camp was referencing. "The R," she said, "could be *insight*, not just money." Parallels — which makes virtualization software for Macintoshes — learns a lot from customers via Facebook and Twitter, she added.

Tapping into customer feedback streams can be tricky, said speakers and other attendees. T-Mobile monitors social networks to gather insights that can benefit product development, said Alex Samano, general manager for Bobsled, a T-Mobile voice-over-IP product. But "you have to be cautious of what you're hearing," he said, since not everyone who posts on Facebook is necessarily representative of other customers.

Still, social-media-based interactions with customers can be useful. Ten years ago, it was common to pay $150,000 to get a focus group of customers together. "You don't have to do that anymore," Samano said.

The rate at which social media followers turn into paying customers varies. AmazonWireless, for instance, hasn't found social networking tools to be particularly efficient at converting traffic into sales, Camp said.

T-Mobile, however, has had great success — for some products. The company launched Bobsled initially for Facebook users and, owing to its media-launch strategy, began signing up users at a rate of 3,000 per hour, Samano said.

– Nancy Gohring, IDG News Service

Micro Burst

Users around the world will have access to

5.8M

public Wi-Fi hotspots in 2015. That's 350% more than today's total.

SECURITY

Report Warns of Cyberspying by China, Russia

The U.S. can expect more aggressive cyberespionage efforts from China, Russia and other countries looking to collect information in areas such as pharmaceuticals, defense and manufacturing, according to a new government report.

The report, from the Office of the National Counterintelligence Executive, also provided recommendations for how organizations can strengthen their defenses.

"Chinese actors are the world's most active and persistent perpetrators of economic espionage," the report said. "Russia's intelligence services are conducting a range of activities to collect information and technology from U.S. targets."

Sensitive information on smartphones and laptops is an attractive target for cyberspies. The report says encryption, multifactor authentication and real-time network monitoring may help keep data safe.

The report cited the case of Dongfan Chung, an engineer with Rockwell and Boeing who worked on the B-1 bomber and was found to have 250,000 documents in his house.

"Cyberspace makes possible the near-instantaneous transfer of enormous quantities of information," the report said.

– JEREMY KIRK, IDG NEWS SERVICE

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Hadoop Is Ready for the Enterprise, IT Execs Say

Big companies are using Hadoop systems in big projects, despite concerns about issues such as security. By Jaikumar Vijayan

DESPITE SOME LINGERING USER CONCERNS about security and other issues, Hadoop is ready for enterprise use, according to IT executives at the Hadoop World conference in New York earlier this month.

Larry Feinsmith, managing director of IT at JPMorgan Chase, told a keynote audience that the financial services firm has been increasingly using the open-source storage and data analysis framework for almost three years.

JPMorgan Chase still relies heavily on relational database systems for transaction processing, but it uses Hadoop technology for a growing number of purposes, including fraud detection, IT risk management and self service, Feinsmith said.

With over 150 petabytes of data stored online, 30,000 databases and 3.5 billion log-ins to user accounts, data is the lifeblood of JPMorgan Chase, Feinsmith said.

Hadoop's ability to store vast volumes of unstructured data allows the company to collect and store Web logs, transaction data and social media data. "Hadoop allows us to store data that we never stored before," he said.

The data is aggregated into a common platform for use in a range of customer-focused data mining and data analytics tools, Feinsmith said.

Meanwhile, eBay is using Hadoop technology and the Hbase database, which supports real-time analysis of Hadoop data, to build a new search engine for its auction site.

Hugh Williams, vice president of experience, search and platforms at eBay, said the new engine, code-named Cassini, will replace technology the company has used since the early 2000s. The update is needed in part to handle surging volumes of data.

He noted that eBay has more than 97 million active buyers and sellers and over 200 million items for sale in 50,000 categories. The site handles close to 2 billion page views, 250 million search queries and tens of billions of database calls daily, he added.

The company has 9 petabytes of data stored on Hadoop and Teradata clusters, and the amount is growing quickly, he said.

Williams said about 100 eBay engineers are working on the Cassini project, making it one of the company's largest development efforts.

The new engine, slated to go live next year, is expected to respond to user queries with results that are context-based and more accurate than those provided by the current system, he said.

Feinsmith warned that IT shops interested in Hadoop should be aware of potential security issues. And he explained that aggregating and storing data from multiple sources can create a slew of problems related to access control and data management, while raising questions about data entitlement and data ownership.

Feinsmith also listed other potential Hadoop drawbacks that users should be aware of before embarking on big projects.

For instance, he said the Hadoop marketplace is "very confusing," featuring an oft-changing slate of vendors, products and standards. In addition, skilled Hadoop engineers are scarce.

And Williams noted that related technologies, such as Hbase, are still somewhat immature, which raises questions about system stability.

But Hadoop has plenty of potential. Feinsmith said that IT workers at JPMorgan Chase are debating whether relational database technologies will evolve to meet the bank's emerging big data needs, or if Hadoop-based systems will become adept at transaction processing. ◆

> **Hadoop allows us to store data** that we never stored before.
>
> MANAGING DIRECTOR OF IT, JPMORGAN CHASE

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How to Cut Better Deals With SAP

Analysts and users offer tips on how to get the best contract terms from SAP as the year draws to a close. By Chris Kanaracus

IT'S CRUNCH TIME for many SAP customers looking to hammer out new software deals and contract renewals before the end of the year.

Experts acknowledge that it might be difficult to persuade SAP to budge on certain things, such as annual maintenance fees for its applications, but customers can take steps to improve their chances of getting strong returns on their investments in SAP software. Here are nine tips to help SAP users secure the best possible deals for both the short term and the long term.

1. Take stock of your existing SAP investments. "If you're in the middle of [negotiations], the best thing you can do to arm yourself is figure out your usage," said Ray Wang, CEO at Constellation Research and a veteran SAP contract negotiator. You could drop unused licenses or move them to other applications.

2. Make SAP's salespeople earn their money. "You want an account manager focused on ensuring your success and solving problems, not searching for new revenue opportunities," said Forrester Research analyst Duncan Jones in a report. Contracts should compensate SAP salespeople for "aspects such as product adoption."

3. Think about bulk purchases. "We would [get] the best deals by accumulating multiple product purchases and negotiating hard down to the last minute," said Tim Birnley, director of enterprise applications at SAP user Bentley Systems. Birnley also said users will "likely get a better deal in November than December."

4. Consider a la carte deals. If you buy on a product-by-product or site-by-site basis, you might end up paying double the amount you'd pay in an enterprise deal, but the expanded choice and flexibility could make it worthwhile, Jones said.

5. Don't lose sight of the big picture. If you're hammering out a new deal, secure contract terms that address the application's full life cycle, from purchase to implementation to eventual replacement, Wang said. You should even think about what-if scenarios, such as mergers and acquisitions.

6. Don't use the L word lightly. Threats to leave SAP only work if you're serious. "To get out of a contract, you need to be ready to leave," Wang said.

7. Consider becoming an early adopter to take advantage of discounts – but be wary. SAP has been rolling out many new products recently, and sales reps are no doubt pushing those offerings hard, hoping to get customers with stable core ERP systems to open their wallets. But you should be aware that heavy discounts offered by an eager salesman might be offset by hefty annual maintenance fees over the long run, Wang said.

8. Have heart-to-heart talks with SAP. A strong relationship involves more communication than yearly contract talks. You should line up "strategic alignment" meetings that include top executives to "help clarify stakeholders' opinions of SAP" and "enhance SAP's opinion of you as a potential enabler rather than merely a negotiation adversary," Jones said.

9. Get ready for next year. According to Jones, it's important to get a real handle on how crucial SAP is to your business overall before starting negotiations. ◆

Kanaracus *is a reporter for the IDG News Service.*

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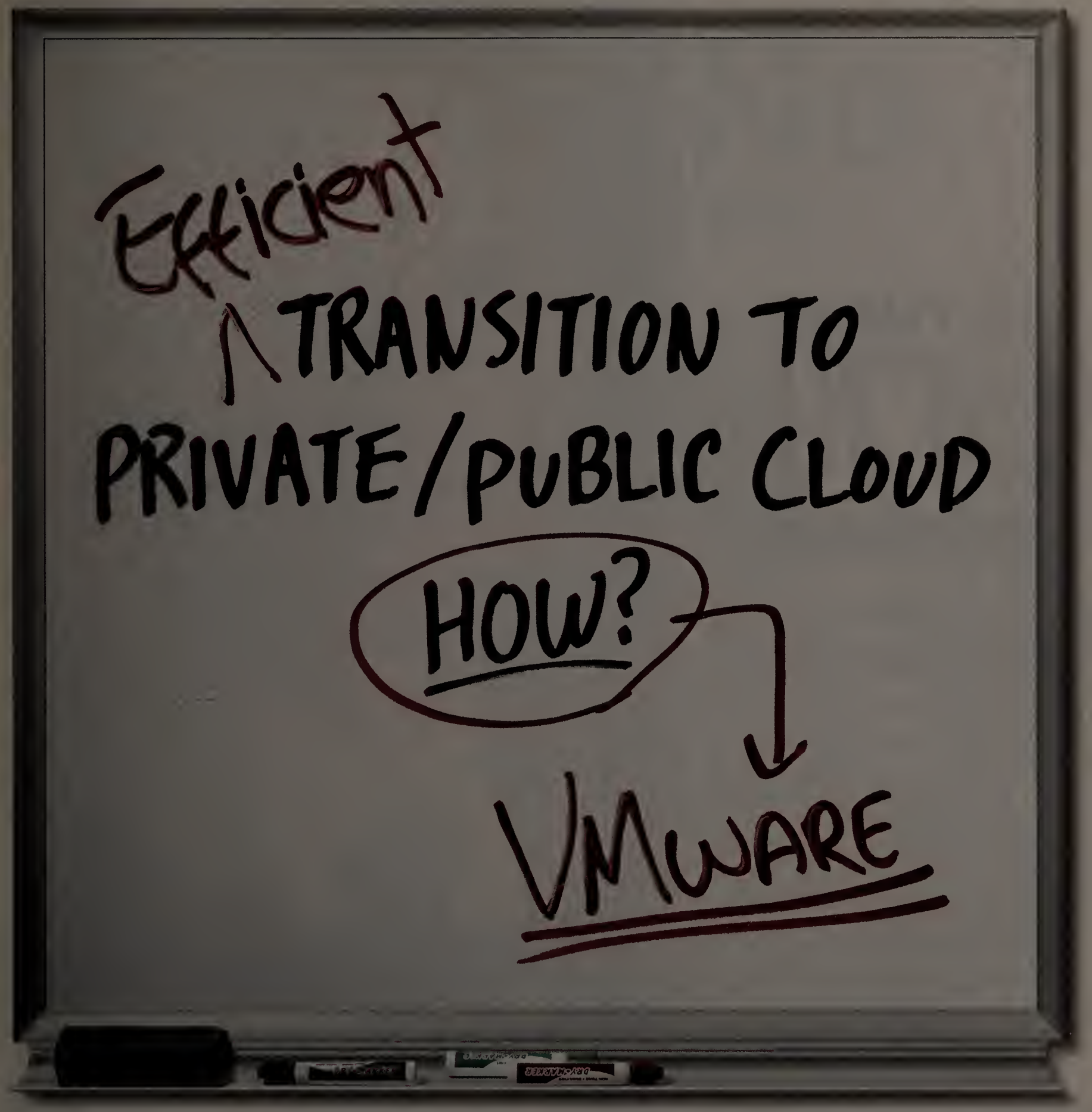

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THE Grill

Joe Spagnoletti

This CIO achieves business goals while deftly balancing his work and home lives.

Family: Married for 23 years, with a 19-year-old son and a 14-year-old daughter.

What are your interests outside of work? Extreme sports – snowboarding, surfing and mountain-biking.

What person do you most admire? My dad. He was a teacher, he raised six kids, and every one of us is successful. There are many pearls of wisdom he shared. One I remember is: "Don't ever tell anyone how good you are. If you're that good, they'll tell you – and then don't believe them."

What futuristic technology do you hope becomes a reality? It would be so great if the technology in cars could prevent accidents and stabilize traffic patterns.

PHOTOGRAPHY BY CLIF BREWER

CAMPBELL SOUP *senior vice president and CIO Joe Spagnoletti is all business. He talks about business objectives and transformation, and he looks at technology as a way to achieve those goals. It's an outlook that helped earn him the Fox IT Leader Award from Temple University's Fox School of Business and Management earlier this year. Spagnoletti, who has been with Campbell's IT operation since 1997 and has been CIO since 2008, says business transformation is happening rapidly and it's pushing IT to change quickly, too. Here he shares some of his other ideas about technology and its role in today's business world.*

When you speak publicly about IT, you say very little about technology. If you had to give a short description of the CIO's job today, what would you say? In our company, there are just a few major premises. One is we have to help the company grow. Second, we have to help the company operate as efficiently as possible. We need to be a critical-

Continued on page 14

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> **I spend more than 50% of my time working with people,** clarifying objectives, mentoring and coaching and making sure we have the right people.

Continued from page 12

partner in the contemporizing of our culture. We truly believe in technology as an enabler. We're not kidding ourselves that technology is the end-all, be-all. It's helping the company, and you can do that by having insight into how work is done and shaping how it can be done better technically.

What, then, are your biggest responsibilities as CIO? I think first and foremost are the people — helping develop the best possible capabilities and insights through people and with people. I spend more than 50% of my time working with people, clarifying objectives, mentoring and coaching and making sure we have the right people. And then it's about leading from out front, understanding our business and looking for ways where our competencies and technology can help the company grow. I spend very little of my time with gadgetry and focusing on the bits and bytes.

What are the biggest challenges you face? It's a balance of doing the right thing and doing it at the right speed and constantly being connected to the agenda of the company and shaping the work that we need to do, hopefully exceeding expectations for what people want and when they want it, but also to help realistically set expectations.

We have technology from the farmer to the shelf — and all the administrative functions, too. So everybody's narrow view is the most important, and some days you could spend your day debating whether you need a portal for communication or optical technology on a harvester and what's going to drive more value to the company. People's expectations are rising, resources are limited and balancing that is an every-moment thing.

How do you do that? I wouldn't say there's a formula, but there are some principles. You focus on the enabling strategies at a company level, and those are clear, so they're the primary driver. Second, you look at value. And there's economic, non-economic and strategic values, and again you're making trade-offs between them. So when you're trying to decide, you ask how it fits with our enabling strategies and, second, how [it creates value] economically and foundationally. And then you look at the short- and long-term implications of that.

How do you ensure that IT is ready to deliver what's needed when the pace of business transformation is so fast? It's alignment, in the way we structure IT, in the business engagement teams that we have. They're smaller, but they're more senior. They live with their business partners, and they do strategic planning together. What if your investment adviser was with you in the house all day, hearing your conversations, and then showed up at the end of every month and said "here's what you should be thinking about"? That's how we do it. We're migrating into this very integrated alignment role with the purpose of shaping IT demand by being in the moment all the time. We've formally organized ourselves to do that. It's not minute to minute, but it is frequently — and with a certain level of depth we've never had before. We just fully restructured the global IT team into this model at the end of June.

What technologies will be the most important for giving companies a competitive advantage in the next few years? Mobility/cloud. I put them together because it's an application that can be anywhere, and the person can be anywhere. And then there's big data, which is analytics. So much of the transaction side of the house, it's in that continuous optimization mode, and there's not tremendous innovation. The big shifts are mobility and having the ability to be out in front of the consumers with information, and analytics will drive that piece of it. It's about shoppers' behaviors and patterns, local demographics and data. And on the consumer side, how do you bring your brand to the world, and how do you represent your company in mobile and social media?

One of your recent tweets was philosophical: "If work-life balance is a state of mind, then work-life integration begins with the person, not the technology." I guess I'm seen as the person [at Campbell] who can balance and keep it all together. Most [people] are struggling with how to make it all work. We all think technology will help with work-life balance, but technology only makes it harder if you don't start by thinking about what's important to you.

– *Interview by* Computerworld *contributing writer* **Mary K. Pratt** *(marykpratt@verizon.net)*

TOUGH QUESTION #18

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N[illegible]RITY FOR THE GLOBAL NETWORK

THORNTON A. MAY

Let's Keep the Board of Directors in the Loop

> Many IT leaders simply aren't keeping up with the workings of their boards of directors.

THE ROLE THAT IT PLAYS in value creation should concern the very top levels of management. That being so, your company's board of directors should be well versed in what is happening in IT.

Chances are that's not the case.

In fact, my research suggests that we have thought very little about what boards of directors know about IT, what they *should* know about IT and what they should do about IT. The smart people in this industry must start focusing on board competence.

Ironically, I stumbled upon this surprising opacity while talking to a group of IT folks who are the very best at digging out, understanding and sharing information. I was conducting a survey of the top analytic professionals at the highest-performing companies in the world and asked these three board-related questions:

- Which board member is it most important for you to have a close relationship with?
- If you could talk to any board member, who would it be?
- If you could talk to the board for two hours, what stories would you tell?

I hadn't expected the answers that these questions elicited. For the most part, the respondents (some of the smartest people in analytics) paused and then admitted, "Gee, I never really thought about that."

What that unambiguously tells me is that what board members are thinking isn't typically top-of-mind for analytic executives. The question for you, my readers, is whether it should be.

Intrigued by what these analytic professionals had to say (or rather, didn't have to say) about IT's relationship with the board of directors, I expanded my survey to include CIOs and CISOs. The responses were similar, with the exception that most of the CISOs had a long list of things they were ready to talk to senior management about.

What the data tells me (besides the panting-dog need of CISOs to be listened to) is that there is, in many organizations, a fundamental disconnect between the board and the enterprise's IT community. Stated more plainly, many IT leaders aren't keeping up with the workings of their boards of directors. That has to change.

Earlier this month at Florida State College at Jacksonville, we conducted a workshop with the executive in charge of enterprise information quality at a global enterprise. This executive — as hard-working and dedicated an IT professional as you will ever meet — was charged with consolidating information management tools. The "as is" situation he described resembled a technological version of Noah's Ark, meaning the organization had purchased two of just about every tool imaginable. The workshop participants came up with some very plausible move-the-ball-forward recommendations. Suggestions included doing a baseline inventory and coming up with a list of tools you want to keep based on criteria such as how easy it is to support, whether employees like it and whether it will scale globally. It was only at the end of the discussion that one of the participants suggested soliciting board support for the effort to consolidate information management tools.

Given the fact that the organization's ultimate success in the marketplace hinges on the quality of the information that management uses to make decisions, this doesn't seem like such a bad idea to me. What do you think? ◆

Thornton A. May is the author of *The New Know: Innovation Powered by Analytics* and executive director of the IT Leadership Academy at Florida State College at Jacksonville. You can contact him at thorntonamay@aol.com.

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Are older workers facing tough times in high tech? Or are they simply not pulling their weight in an industry that never stops innovating?

IT's age problem

BY TAM HARBERT

AGE BIAS: Some consider it IT's dirty little secret, or even IT's big open secret.

Most high-tech employers would likely deny that age discrimination is an issue at their companies. But many IT workers over 50 beg to differ, saying they have experienced age bias or know someone who has.

The bias can take several forms, they say. Their salaries might stagnate. They might have few or no opportunities for advancement. They might not be included in training and

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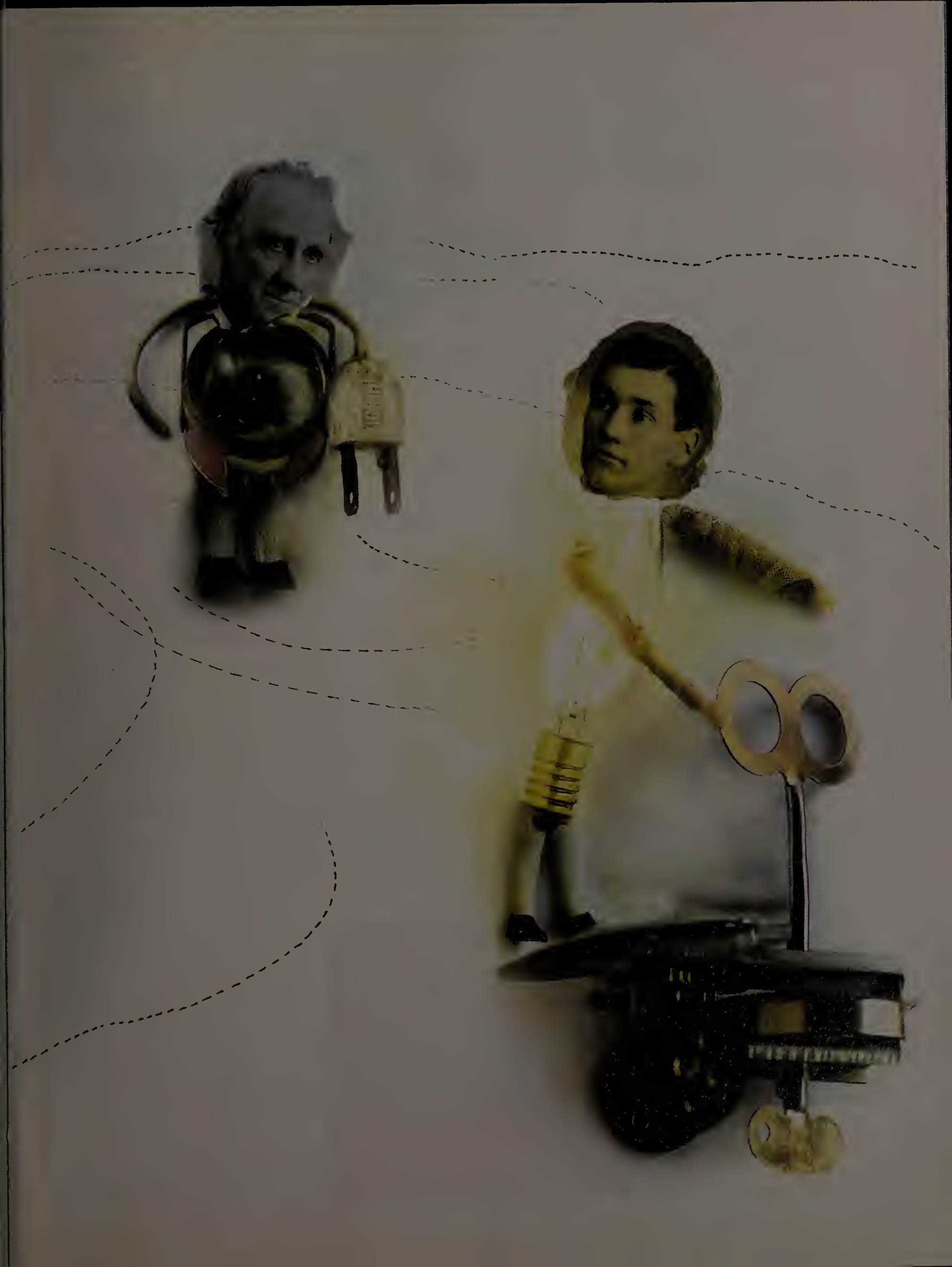

professional development programs. And they might be the first to be laid off and the last to be hired.

As a result, they may be hit harder by the recession. According to recent U.S. government data, unemployment rates for older IT professionals have increased more quickly than the rates for younger tech workers since the recession began some three years ago (see chart, page 24).

All of that can add up to a tough road for older people in high tech.

Age bias is "something that no [employer] talks about. But it's a reality in tech that if you're 45 years of age and still writing C code or Cobol code and making $150,000 a year, the likelihood is that you won't be employed very long," says Vivek Wadhwa, who currently holds academic positions at several universities, including UC Berkeley, Duke and Harvard.

> **You still picture yourself as the 30-year-old hotshot,** but the reality is you're not that guy anymore.
>
> **ROBERT AYR,** MANAGER OF PRODUCTION SERVICES, VHA INC.

As Wadhwa's observation indicates, "age bias" is a simplistic label for a complicated set of factors that influence the job prospects for senior tech employees. When considering workers over the age of 50, employers take the following factors into account:

- The relevance, applicability and currency of their skills, which may or may not be up to par with those of younger employees.
- The level of compensation they expect, which is typically higher than the salaries younger people seek.
- Their behaviors and attitudes, which can become rigid and narrow-minded with age.
- Their energy level, which is presumed to be lower than that of a 25-year-old.

While none of these generalizations is necessarily true for any particular candidate, each is a stereotypical assumption about older workers. What's more, they are all logical and legal reasons for an employer to fire, or not hire, someone.

"If you can hire someone fresh out of college for $60,000 who is likely to know the latest technology, or you can hire someone 45 years old who's making $140,000, who are you going to hire? That's the harsh reality, whether we like it or not," says Wadhwa, 53, who started his career in IT as a programmer and then went on to be an entrepreneur before entering academia.

Robert Ayr hears that message loud and clear. At 57, he's fully and happily employed in IT as the manager of production services at Irving, Texas-based VHA Inc., a national network of not-for-profit healthcare organizations. He gives himself credit for managing his career well through turbulent times, but at the same time, he can't help but look over his shoulder.

By his own estimate, since graduating college in 1977, Ayr has held nine or 10 technology positions all over the country — in California, Massachusetts, Texas and New York. "Especially in the beginning, I was moving all over the place — to expand my knowledge base and to further my career," he says.

As he got older, he moved less and stayed in positions longer, but always took care to keep his skills fresh, moving from mainframes to VMS to his current specialty — servers. "I say every 10 years it's time to retool," he explains. "I keep trying to learn as much as I can, otherwise you become a dinosaur."

Even so, Ayr acknowledges that the climate begins to change as the years of experience add up. He recalls when he was passed over for a job years ago in favor of a candidate who had nearly the same credentials as he did but was 20 years younger.

"I ran into the guy a couple months later at a users' group meeting, and I asked him right up front what kind of money they were paying him. The bottom line is, he was willing to work for less. That's what happens."

"I was always the youngest person wherever I went; now I'm one of the oldest," Ayr says. "You still picture yourself as the 30-year-old hotshot, but the reality is you're not that guy anymore."

Older Workers by the Numbers

What do we know about the aging workforce in the U.S., and about older tech workers in particular?

For starters, more older Americans are remaining in the overall workforce. Last year, the percentage of people aged 55 and older in the workforce reached 40%, its highest level in 35 years, according to a study published in February 2011 by the Employee Benefit Research Institute. And that's after the 2008-2009 recession, when many older workers lost their jobs.

But are older IT professionals remaining in the workforce? Solid numbers are difficult to find; the data that is available is sparse and sometimes inconsistent. Studies of older workers rarely break down results by profession. Recruiting firms offer data on hiring, and sometimes on salaries, by profession, but they typically don't break it down by age.

Other studies track unemployment, but not by age or profession — so it's difficult to know how many older IT professionals want work but can't find it. The picture is further blurred when companies outsource and offshore IT jobs, or import workers through the H-1B and other visa programs — potentially displacing U.S. workers, including older employees.

Add the fact that some IT professionals voluntarily bail out at a certain age, either to pursue new careers or to start their own businesses, and you can see why researchers find it difficult to quantify trends.

One set of data that does bring several of these factors together comes from the U.S. Bureau of Labor Statistics (BLS). The agency released numbers in early 2011 that show that

Continued on page 22

MORE OLDER AMERICANS ARE WORKING

Year	Labor participation rate of workers 55 and older
1975	34.6%
1993	29.4%
2010	40.2%

SOURCE: EMPLOYEE BENEFIT RESEARCH INSTITUTE ANALYSIS OF THE U.S. BUREAU OF LABOR FORCE PARTICIPATION

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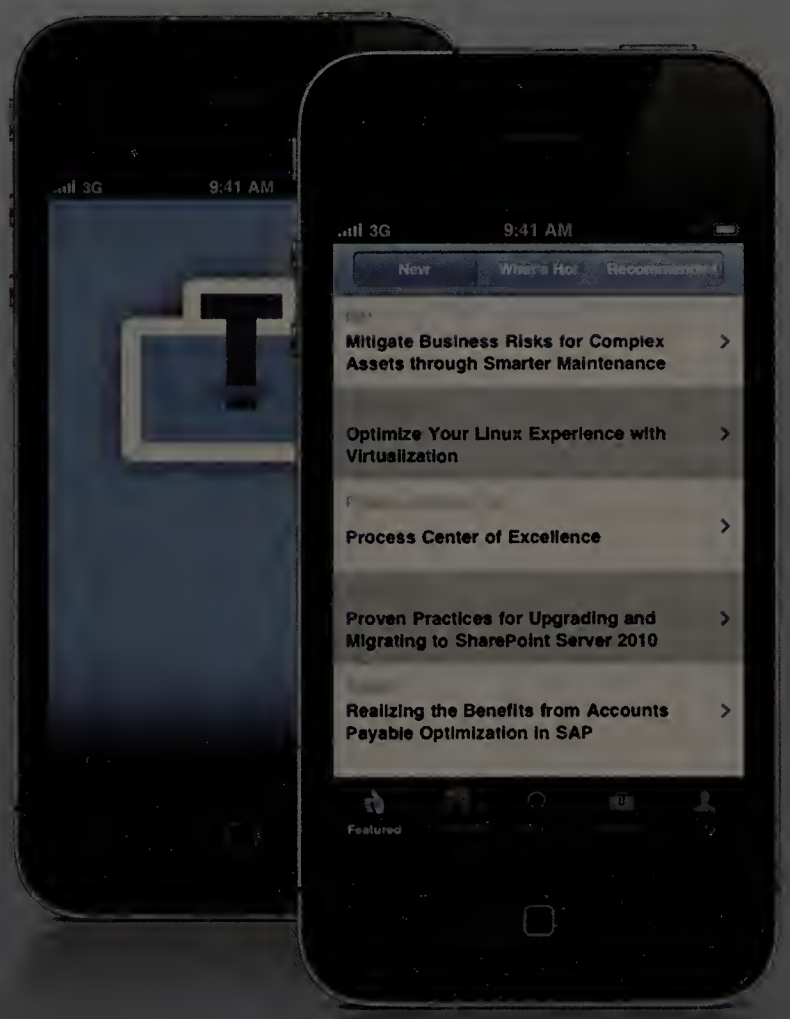

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aging gracefully

YOU MAY NOT BE ABLE to turn back the clock, but there are a few things you can do to increase the likelihood of getting a job and staying employed as you age. Step 1 is recognizing that your skills have a certain shelf life. Rather than fight it, IT professionals should consider that when planning their careers.

In fact, Vivek Wadhwa believes that colleges should tell computer science and engineering students that "between age 40 and 45 you'll hit your peak, so plan for it." That could mean saving a substantial part of your salary when you're young, so you'll be able to earn less and still get by in IT as you age or use the savings as a cushion if you change careers, says Wadhwa, who started his career as a programmer and then went on to be an entrepreneur and later entered academia.

Here is a list of things you should and shouldn't do if you hope to stay in IT:

do

- **Keep your skills up to date,** even if your employer doesn't pay for professional development.
- **Consider moving into IT management,** where longevity and experience are more likely to be seen as positives rather than negatives.
- **Take advantage of a technical career path, if your company offers one.** Some corporations have a dual-track system that allows technical folks to move up a ladder that's comparable to the one managers climb, says Paul Ingevaldson, who spent 40 years in IT and retired from his job as CIO of Ace Hardware in 2004.
- **Build and maintain a professional network independent of your current position** so you have lots of contacts to tap if you are laid off or decide to start a consulting business.
- **Learn how to use social media** to promote yourself, research potential employers and find current employees to refer you for jobs.
- **Dress like your co-workers.** Dress codes vary widely from company to company and from job function to job function, but in general you should aim to dress like your colleagues. If they're wearing shirtsleeves, your Dr. Who T-shirt probably isn't appropriate.

don't

- **Act bored or tired either at your job or during an interview.** That feeds into stereotypical assumptions about age.
- **Come off as a know-it-all.** While decades of experience are valuable, employers are wary of narrow-mindedness in candidates who think they know exactly how things should be done. "You must be flexible to new ways of working and to new culture," says Steve B. Watson, a [illegible] at executive recruiting firm Stanton Chase.

Continued from page 20

older IT workers have higher rates of unemployment than both younger IT workers and older workers in other professions.

In the category of "computer and mathematical occupations," the overall unemployment rate for people aged 55 and older jumped from 6% to 8.4% from 2009 to 2010, according to the data. For people 25 to 54 years old in that job category, the unemployment rate fell from 5.1% in 2009 to 4.5% in 2010.

Those figures are particularly striking when compared to the overall population, where 55-plus workers had lower unemployment rates (7%) than the 25-to-54-year-olds (8.5%) in 2010.

That trend seems to be reflected in the level of anxiety among older IT workers who still have jobs. According to *Computerworld*'s 2011 Salary Survey, the number of IT people feeling somewhat or very insecure in their jobs rises steadily with age (see chart, page 23).

As to the flat-lining of wages that's rumored to sometimes happen in the second half of a high-tech career, *Computerworld*'s survey didn't turn up evidence of age bias in actual salaries, but employees aged 55 and older were the most likely to report that they had generally "lost ground financially" in the past two years.

An academic study of IT salaries published in 2008 did show interesting disparities in compensation by age in three specific industry segments — finance, IT and medical. Although the report is now out of date — it was based on data from 2001 — at least one of the original researchers believes its findings still hold true.

"The slow economic recovery and the stubborn high unemployment rate we have right now only make age discrimination even more pronounced," says Jing Quan, an associate professor at Salisbury University in Salisbury, Md. "IT companies are more likely to value IT workers who have the most updated skill sets and can get the job done," he says. "And those are more likely younger IT workers."

Keep Up or Keep Out

The hyper-accelerated pace of change in high technology makes it a challenging field to keep up with. Quan puts it bluntly: "The special characteristics of the IT industry — highly competitive, fast-paced, short skill update cycle — do not favor older workers."

Julie McMullin, a professor at Canada's University of Western Ontario, elaborates. "Perceptions of 'older,' in this particular industry, have a lot to do with competing demands," says McMullin, who leads an international project called Workforce Aging in the New Economy (WANE) that studies aging and workforce restructuring in the IT industry.

"If you're an unencumbered worker" — that is, single with lots of time to work extra hours and attend training to update your skills — "then you're 'young,' " she says.

By those standards, Ronda Henning could pass for a spring chicken. In real-life years, she's 53, but by her own estimate, she has logged enough extra hours and obtained enough degrees to give younger workers a run for their money.

A senior scientist specializing in security at Harris Corp., a communications and IT company based in Melbourne, Fla., Henning has earned several graduate degrees to supplement her undergraduate degree (a B.A. in English and political science from the University of Pittsburgh). She holds an MBA from the Florida Institute of Technology and an M.S. in computer science from Johns Hopkins University, and she's currently working

OLDER WORKERS FEEL LESS SECURE

The level of security that high tech workers feel in their current position, by age (percentage of total respondents):

Age	18-24	25-34	35-44	45-54	55+
Very secure or secure	69%	69.5%	59.3%	51.9%	55%
Somewhat secure	26.2%	23.8%	29.8%	34.3%	29.1%
Not very secure or not at all secure	4.8%	6.7%	10.9%	13.9%	15.9%

SOURCE: *COMPUTERWORLD*'S 2011 SALARY SURVEY OF 4,852 HIGH-TECH WORKERS EMPLOYED FULL OR PART TIME

toward a Ph.D. in information systems.

Beyond that, Henning has taken care to invest in her career on her own time — publishing and presenting papers at conferences and identifying and pursuing new business initiatives within her organization. "Often, that has to happen on your own time, in addition to your standard assignments," she warns.

And then there's the constant influx of the new, and the challenge of separating signal from noise. "I make a conscious effort to stay current, but these days, it's very hard to absorb everything and figure out what's truly important," Henning acknowledges. "It can become a 24-hour-a-day job to try and do that."

To be sure, IT isn't the only profession in which older workers are vulnerable if they haven't kept their skills up to date. Administrative assistants who don't know the latest office productivity software, or journalists who don't have multimedia skills, for example, are in the same boat.

In fact, as technology pervades more and more professions, the pressure to keep up with the pace of change is affecting a wider swath of the population, especially baby boomers who are reluctant, or unable, to retire.

"It's the same thing everywhere, except in IT it happens faster," says Wadhwa. "In IT, you're at the epicenter of the earthquake in technologies."

Hot Jobs vs. No Jobs

Certain types of IT jobs appear less susceptible to ageism than others. Systems architects and project managers, for example, are relatively safe, observers agree, as are IT employees with highly specialized skills such as scientific programming or mobile application development, provided those skills remain in demand.

Steve B. Watson

And management can be a haven for aging IT folks who have people skills. Salisbury University researcher Quan's report showed that in management, if not elsewhere, older IT workers made higher salaries than the under-40 set.

These days, companies seem more willing to hire older IT executives than they were five to 10 years ago, says Steve B. Watson, a managing director at executive recruiting firm Stanton Chase. Companies "need someone who can hit the ground running," he says. "There's less interest in giving a honeymoon period to a newcomer, less time for training than there was in the past." In addition, he sees a talent gap in management, probably created by the fact that baby boomers are starting to retire.

Likewise, companies are willing to look at older workers who have the skills the organization needs. For example, Axcelis Technologies, a maker of semiconductor capital equipment, needs professionals with highly specific skills — including physicists, experts in robotics and programmers with FORTH experience — says Lynnette Fallon, executive vice president of human resources and legal at the Beverly, Mass.-based company. "Sometimes it's hard for us to find people who are good at this software," she says.

Fallon doesn't see any negatives to hiring older people. Because they are mature and experienced, they can mentor younger staffers, and mentoring is "the best kind of training," she says. Experienced professionals do cost more, she acknowledges, which means the company must weigh the cost of hiring veteran workers against the benefits they offer. "You obviously need a balance in the workforce," she says.

Too Old to Code?

In contrast, programmers who are over 40 can face a bleak future — particularly if they didn't get on the management track or didn't keep their skills up to date. "In some IT departments, you could hang on until the company gets into trouble," says Wadhwa, "but when it does, you'll be the first to go."

When McMullin has interviewed people for the WANE project, some respondents have talked negatively about those "too old to code," she says. "People would be giving us these descriptions of ZZ Top-looking programmers sitting in the back corner working in Cobol."

The problem for programmers is twofold: For one thing, the desired skills keep changing, requiring them to refresh their talents on a nearly continuous basis. And, unlike managers, programmers often don't have a clear career path within an organization.

Dennis O'Connor is one programmer who, through a mix of hard work and lucky breaks, has managed to hang on in high tech without taking the management track. O'Connor is 72 and still working, most currently as a programmer and analyst for the Alexandria, Va., city government.

O'Connor started out at Blue Cross of Virginia in 1965 as a computer operator on a Honeywell 400 mainframe. He moved on to programming Cobol on a 360-30 mainframe, and spent some years in banking before moving into municipal government — a sector that high-tech industry watchers consistently identify as being more accepting of older workers than its corporate counterparts.

He was hired by the city of Alexandria 11 years ago to service a Cobol-based payroll system, with the understanding that the system was scheduled to be phased out within a year and a half (but that has yet to happen, O'Connor points out with some amusement).

During a reorganization several years into his tenure that left

O'Connor without a clear next step, a higher-up put him in a management position, but it wasn't to O'Connor's liking. "Supervision is not my thing. Over the course of my career, I have not been happy with it," he says. "Any time I could get out of it, I did. I do so much better as a programmer/analyst."

So he talked his way into a job on the Windows client-server side of the house, supporting the city's Tidemark Permit Plan system for people in various departments using SQL Server and Crystal Reports — a job he now loves. "It was totally alien to me. I had to figure out what in the world I was doing," O'Connor recalls.

"I'm sure there was some apprehension on the part of my manager that I was being dumped on them, but as it turns out, he has been more or less pleased," he says.

Loyal No More

If high-tech watchers and older workers agree on anything, it's that the onus is squarely on IT employees to keep themselves current and capable. They shouldn't expect the industry to behave as if it owes them anything.

Traditional loyalty has disappeared on both sides over the past 30 years — companies in general are no longer paternalistic, and workers don't think twice about jumping ship when they get a better offer. Still, there are some glimmers of hope for an understanding between older workers and hiring companies. Michael T. Abbene, who in 2009 retired as CIO from St. Louis-based Arch Coal, says "companies still have a responsibility to make training available and encourage people to update their skills."

And on the corporate side, there are operational reasons for companies to consider retaining their older workers. "There is a need for institutional memory, even in a fast-moving field," Abbene argues.

As a founder of two software companies, Wadhwa says he had no problem hiring older workers — albeit at salaries that were 20% lower than they had made in previous positions. "For the price, they were a much better value," he says.

He recommends that approach to other employers. "It makes economic sense. They have more experience and they are more steady — they won't leave you," he says.

Wadhwa, like many others, says there is value in the maturity, experience and even keel that many older workers possess. If it's just not as high a value as employers would like, then, well, that's the state of the market circa 2011. ◆

Frequent Computerworld *contributor* **Tam Harbert** *is a Washington, D.C.-based writer specializing in technology, business and public policy. Additional reporting by* Computerworld *features editor* **Tracy Mayor.** *Additional research provided by editorial project manager* **Mari Keefe.** *Bureau of Labor Statistics chart by online managing editor* **Sharon Machlis.**

U.S. UNEMPLOYMENT RATES, 2009-2010

	25-54 yrs.		55+ yrs.		All (16+)	
	2009	2010	2009	2010	2009	2010
Total population	8.2	8.5	6.5	7.0	8.6	8.9
All professional	4.2	4.1	4.3	4.6	4.4	4.5
All computer and math	5.1	4.5	6.0	8.4	5.2	5.2
Architecture and engineering	6.2	5.2	9.9	9.4	6.9	6.2
Life, physical, and social sciences	4.3	4.2	4.0	5.5	4.5	4.6
Community and social service	3.8	4.7	4.3	2.9	4.3	4.6
Legal	3.6	2.7	2.8	2.3	3.4	2.7
Education, training, library	3.8	4.1	3.7	3.6	4.1	4.2
Health	2.3	2.3	2.1	2.7	2.3	2.5
Arts, entertainment, sports, media	8.0	8.1	7.4	8.4	8.4	8.9
Male all	9.1	9.2	7.0	7.7	9.7	9.8
Male professional	4.5	4.3	4.6	5.1	4.8	4.9
Male computer and math	5.1	4.3	4.9	8.0	5.1	5.1
Female all	7.0	7.6	6.0	6.2	7.4	7.9
Female professional	4.0	4.0	4.1	4.1	4.2	4.2
Female computer and math	5.2	5.1	8.9	9.4	5.7	5.7

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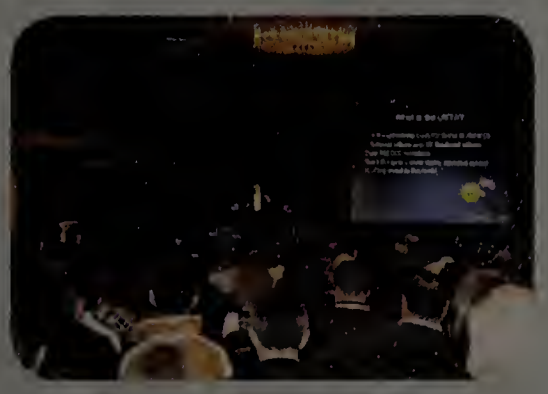

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New threats can turn smartphones into spam bots, shut off electricity or jam GPS signals.

BY JOHN BRANDON

When Cybercriminals ATTACK

CRIMINAL HACKERS NEVER SLEEP, it seems. Just when you think you've battened down the hatches and fully safeguarded yourself or your business from electronic security risks, along comes a new exploit to keep you up at night. It might be an SMS text message with a malevolent payload or an errant signal designed to jam GPS receivers.

Whether you're protecting corporate data or simply trying to keep your personal files safe, these threats — some rapidly growing, others still emerging — put your systems at risk. Fortunately, security procedures and tools are available to help you win the fight.

Continued on page 28

FOTOLIA ENGINE IMAGES

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LAPTOP BEST OF CTIA WIRELESS FALL 2011

Network details and coverage maps at **vzw.com**. © 2011 Verizon Wireless.

verizon

Continued from page 26

1 Text-Message Malware

While smartphone viruses are still fairly rare, text-message attacks are becoming more common, according to Rodney Joffe, senior vice president and senior technologist at mobile messaging company Neustar and director of the Conficker Working Group, a coalition of security researchers that came together to fight the malware known as Conficker. PCs are fairly well protected today, he says, so some black-hat hackers are now targeting mobile devices. Their incentive is mostly financial: Text messaging provides a way to break into devices and make money.

Khoi Nguyen, group product manager for mobile security at Symantec, confirmed that text-message attacks aimed at smartphone operating systems are commonplace now that people are increasingly reliant on mobile devices. It's not just consumers who are at risk, he adds. Any employee who falls for a text-message ruse using a company smartphone can jeopardize the business's network and data and possibly cause a compliance violation.

"This is a similar type of attack as [is used on] a computer — an SMS or MMS message that includes an attachment, disguised as a funny or sexy picture, which asks the user to open it," Nguyen explains. "Once they download the picture, it will install malware on the device. Once loaded, it would acquire access privileges, and it spreads through contacts on the phone, [who] would then get a message from that user."

In this way, says Joffe, hackers create botnets for sending text-message spam with links to a product the hacker is selling, usually charging you per message. In some cases, he adds, the malware even starts buying ring tones that are charged on your wireless bill, lining the pockets of the hacker selling the ring tones.

Wireless carriers say they do try to stave off the attacks. For instance, Verizon spokeswoman Brenda Raney says the company scans for known malware attacks, isolates them on the cellular network, and even works with federal crime units to block them.

To keep such malware off users' phones, Joffe recommends that businesses institute strict corporate policies limiting whom employees can text using company networks and phones, and what kind of work can be done via text messaging. Another option is a policy that prohibits text messaging entirely, at least until the industry figures out how to deal with the threats.

2 Hacking Into Smart Grids

A common misconception is that only open networks — say, corporate wireless LANs that visitors may use — are hackable. Not true, says Justin Morehouse, a principal consultant at Stratum Security who spoke about network security at last year's DefCon hacker convention. Morehouse says it's actually not that difficult to find an access point for a so-called closed system.

Some nuclear plants and power grids have wireless networks that are vulnerable to attack. And supervisory control and data acquisition (SCADA) systems aren't safe either.

For example, the Stuxnet worm last year infected tens of thousands of Windows PCs running Siemens SCADA systems in manufacturing and utility companies, most notably in Iran. It was largely spread via infected USB flash drives. "Stuxnet proved that it is relatively simple to cause potentially catastrophic damage" to an industrial control network, says Neustar's Joffe.

According to Morehouse, another new attack point will be smart grids that use electronic metering to streamline power management. Utility companies around the world have begun testing and rolling out smart grids to homes and businesses. The technology, which can send data to and receive it from a central system, can also be very helpful for IT: You can open a console to see the power usage for one section of a building, for example.

But smart grids might be vulnerable to attacks that would allow nefarious hackers to cut off electricity at homes and businesses and wreak other kinds of havoc. One possible attack vector is a smart grid's communications infrastructure. For example, Morehouse says, a German utility company called Yello Strom uses a consumer smart grid system that works like a home automation kit — the sensors report energy usage back to the central server via the user's home Wi-Fi network.

The most effective preventive measure, says Morehouse, is rigid isolation — a smart grid should not touch any other network. Given the dangers that can arise if a hacker gains access to a smart grid, he says, companies should conduct penetration tests and make sure that firewalls in closed networks are secure. He advises using tools such as Core Impact and Metasploit.

3 Social Network Account Spoofing

Users of Facebook, LinkedIn and other social networks are vulnerable to attacks that rely on account spoofing. A scammer poses as either someone you know or a friend of a friend, in order to fool you into revealing personal information. He then uses that information to gain access to your other accounts and eventually steal your identity.

In a typical exploit, says Joffe, someone contacts you on a site like Facebook or LinkedIn, pretending to be a friend of a friend or a co-worker of someone you trust. Then, this new "friend" contacts you directly through text message or email. The correspondence seems legitimate because you believe he has a connection with an individual you trust.

In another scenario, a scammer might impersonate someone you already know — claiming to be an old friend from high school, for instance. Spoofers can find out your connections by following your public feeds or looking up the names of co-workers on sites like LinkedIn, where you've posted your work information.

Once the scammer has established a connection with you, he uses devious means to steal personal data, such as chatting online to find out the names of your family members, favorite bands, hobbies and other seemingly innocuous information. Then he uses that information to try to guess your passwords or answers to security questions for banking sites, webmail accounts or other online services.

Morehouse describes another type of attack that targets companies as well as individuals. The spoofer might set up a Facebook page that claims to be the official company page for, say, a major retailer. The spoofer might claim that the page is a formal method to contact the company or register complaints.

The page might offer fake coupons to entice people to join, and it soon goes viral as people share it with their friends. Once hundreds or thousands of users have joined the page, says Morehouse, the owner tricks them into giving out personal information, perhaps by signing up for additional coupons or special offers.

This ends up being a double attack: Consumers are harmed

because their personal data is compromised, and the company is harmed because its customers now associate the fake Facebook page with the real company — and decide not to buy from that company anymore.

Joffe says there is no way to prevent a criminal from setting up a fake Facebook page, but companies can use monitoring tools such as Social Mention to see how the company name is being used online. If an unauthorized page turns up, companies can ask the social network to remove the fake listing.

4 GPS Jamming: Threat or Nuisance?

An emerging criminal tactic — interfering with GPS signals — has security experts divided on just how harmful it could become.

Jamming a GPS signal at the source is next to impossible, says Phil Lieberman, founder of enterprise security vendor Lieberman Software. Blocking the radio signals that are broadcast from orbiting GPS satellites would require a massive countertransmission. And because the satellites are operated by the U.S. military, jamming them would be considered an act of war and a federal crime, says Lieberman.

However, it is easy to jam GPS receivers using low-cost jamming devices like one sold by Brando. The devices jam a receiver by overloading it with a signal that's similar to the real GPS signal. The receiver then becomes confused because it can't find a steady satellite transmission.

Lieberman doesn't give much credence to fears about jammers disrupting airplanes or air traffic control systems, because those networks use a completely different GPS signal from the one we use in cars and handheld devices. Jamming could, however, be a potentially dangerous issue when it comes to financial records, he says, because GPS devices are used in the banking industry to add time stamps to financial transactions. Although completely blocking transactions would be difficult, Lieberman says, an industrious hacker could theoretically disrupt transactions and cause headaches for banks.

Security expert Roger Johnston, a systems engineer at the Argonne National Laboratory in Chicago, says spoofing GPS signals is the greater danger, explaining that GPS receivers are low-power devices that latch on to any strong signal. He says spoofing could be used for serious crimes — tricking a delivery truck driver into turning down a dark alley, changing the time stamps on financial transactions, delaying emergency vehicles from finding their routes. There have been no reported cases of GPS spoofing to commit a criminal act, but Johnston warns that the government and businesses should work to deter such attacks.

Taking some extra precautions — using strong encryption technology, engaging only with trusted friends on social networks, and using penetration testing software on corporate networks — can alleviate some fears and help you sleep at night, even if the bad guys keep coming up with new exploits. ◆

Brandon *is a former IT manager at a Fortune 100 company who now writes about technology. He's written more than 2,500 articles in the past 10 years. Follow his tweets at @jmbrandonbb.*

BI system development hits the ground running with ***efficiency and flexibility*** using the agile methodology. **BY BOB VIOLINO**

TODD PEARSON / GETTY IMAGES

Off to a FAST START

FEELING LIKE your business intelligence efforts are a bit sluggish and out of touch with what the company needs? Maybe it's time to try agile BI, a rapid development methodology that solicits end-user input early and often and delivers BI systems fast.

While the use of the agile software development methodology is a big component of agile BI, it's by no means the only attribute, says Boris Evelson, an analyst at Forrester Research.

Forrester defines agile BI as an approach that combines processes, methodologies, tools and technologies, while incorporating organizational structure, in order to help strategic, tactical and operational decision-makers be more flexible and more responsive to ever-changing business and regulatory requirements.

Very few organizations have implemented agile BI as Forrester defines it, Evelson says. Based on anecdotal evidence and discussions with clients, he estimates that out of all the organizations that use BI applications, probably less than 20% of the BI user population within those organizations is leveraging some kind of agile BI. But he predicts that this figure will climb to about 80% in the near future.

Business intelligence is particularly well suited for agility and the agile development methodology, says David White, an analyst specializing in BI at research firm Aberdeen Group.

Research conducted by Aberdeen in February and March indicates

Continued on page 32

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Change

PFIZER is one of the companies that's seeing benefits from agile BI. For the past three years, the New York-based pharmaceuticals maker has been using the agile approach to develop data integration and delivery services, data-capture applications and BI reporting capabilities.

"We have recognized that the [internal] customers of each service we provide need a very rapid and flexible approach to meet their needs," says Michael Linhares, a research fellow in business information systems and pharmaceutical sciences at Pfizer. "It is expected that our applications and system can be adapted to the changes in the business just as fast as the business itself is changing."

Pfizer is using BI application development tools from a variety of vendors, and it provides BI applications and data to about 1,000 users within the company, he says.

"Our applications allow for the collection, integration and reporting on [drug development] projects," Linhares says. "This includes project status, financial forecasting, resource forecasting and integration with several other aspects – including the drug supply chain."

The new approach to BI enables Pfizer's application developers to move more quickly. For example, it used to take six to 12 weeks to make a significant change in the way data is presented in a data warehouse. With the agile development methodology, it typically takes three to seven days, he says.

Pfizer also involves end users as much as possible in the development process. "The customer [end user] is key to this approach of development," Linhares says. "The customer reviews the paper prototype, the working prototype, tests and validates the data, and will be the key to supporting a production release to a larger community of users. Our systems are designed and built for the end user. Without their constant interaction, our team could not build a useful product."

– BOB VIOLINO

Continued from page 30

that organizations face three significant challenges when it comes to effectively delivering BI that is truly valuable to the business.

First, data volumes and the number of BI data sources are growing. Second, the amount of time managers can devote to decision-making is shrinking. And third, demand for management information is always increasing.

Clearly, BI implementations have to be more agile so managers can easily find the information they need as business requirements change. And to achieve that, companies must analyze their organizations' business needs and take them into account when configuring and deploying BI software, White says.

The Aberdeen research shows that organizations with the most highly agile BI implementations are more likely to have processes in place for ensuring that business needs are being met.

Another key to success is to heavily involve end users in the BI development process. At nearly 70% of the organizations that are successfully deploying agile BI, IT and business people collaborate frequently, according to Aberdeen. Such interaction is not as common at organizations that are less agile; only 50% of them report frequent collaboration between IT and the business.

The interaction that's needed might not come easily, White notes. "There has always has been a communications barrier between IT and the business," he says, and that barrier must be knocked down if agile BI is to become a reality. "That close involvement and the iterative process is part of the agile methodology, and it's very applicable to BI. Developers working with business users side by side or close by is very powerful."

Rapid Delivery

Organizations using agile BI are tapping into that power. One example is Kiva, a San Francisco-based nonprofit that arranges person-to-person loans via the Internet to help alleviate poverty. In 2010, Kiva implemented a new data warehousing and BI application based on Pentaho's Agile BI technology to handle its rapidly growing stockpile of data and replace an increasingly inefficient ad hoc analysis process that was done via spreadsheets.

Kiva has grown rapidly since its founding in 2005, and it has helped entrepreneurs around the world secure more than $200 million in microloans from individual lenders. As of April 2011, the organization had united more than 570,000 lenders, 131 microfinance institutions and some 450 volunteers around the globe.

The nonprofit has used Pentaho's open-source development platform to create monthly, weekly and program-specific dashboards that product managers and finance specialists can use to track and manage key metrics such as transaction volumes, new user registrations and promotion performance, says Greg Allen, a business analyst at Kiva. The organization has developed tools such as a "loan posting explorer," an application that allows risk managers to analyze loan posting patterns based on region and country, type of loan and type of borrower, he says.

The biggest benefit that Kiva's agile BI efforts have yielded is the ability to rapidly and incrementally deliver information to end users. "We have a big vision for our data warehouse project, which will require a substantial time investment to complete," Allen says. "Instead of forcing the organization to wait for a 'big switch,' we are able to focus on specific business areas to design, create and release data marts and reports as part of our iterative development."

Documenting user requirements is critical to the design of the data structures underlying Kiva's BI system, Allen says. "We've found that our users respond best to testing early versions of our BI solutions," he says. "Ad hoc data sources enable us to test business logic to collect and incorporate user feedback quickly, before developing more robust reporting data structures. This can expose unforeseen [difficulties and] lead to more comprehensive solutions."

Allen says having greater agility with BI development gives the organization more flexibility. "Our business can change quickly, and being able to respond quickly with data-driven decisions is critical to our growth," he says. "Agile BI enables us to capture new data and transform it into information."

Although Kiva is at the beginning of an ambitious plan for its data warehouse and reporting capabilities, "we are already able to deliver new insights on our user base and partners," Allen says. "Often, these early or narrow views into business areas have generated new questions that improve the next iteration of development." ◆

Violino *is a freelance writer in Massapequa Park, N.Y.*
You can contact him at bviolino@optonline.net.

Security Manager's Journal

MATHIAS THURMAN

Sensitive Data, in the Wild

It isn't easy to stop your employees from posting things they shouldn't on social media and file-sharing sites.

IF YOU don't think it's a big challenge to protect sensitive company information and intellectual property, listen to this story.

Last week, one of our sales associates visited a customer to review the road map for one of our flagship products. This discussion was to be confidential, so you can imagine the sales associate's consternation when the customer said he had already viewed the presentation on the Web.

He simply searched SlideShare.net, an online community for sharing presentations, and found ours. Access wasn't restricted (though restricting it is an option), so he was able to download it and have a look — ignoring the "Restricted Use Only" label slapped across it.

The uproar that this situation created reached me quickly, and I was asked to remove the file from SlideShare.

One difficulty with that request was that only the user who uploaded the file could remove it, and that user had uploaded it anonymously, so I couldn't just send him an email and tell him to take it down. I might have been able to get his attention by blogging about the problem, but then we would've been advertising our misstep to the public. I contacted SlideShare and asked that the file be removed, but like most social media and file-sharing sites, it wouldn't act on a request from a third party, even though that third party was the security guy at the company that created the presentation. That left legal action as our last resort; our legal department filed a request through the Digital Millennium Copyright Act.

Because I am a security guy, this turn of events didn't come as a great surprise. Things like this are inevitable in an era of proliferating social media and cloud-based data sharing and storage. I've denied several requests to use the cloud to store corporate data — I'm not satisfied with the security these services offer — but reports generated from our firewall show widespread use of these technologies.

the discussions about security! **computerworld.com/blogs/security**

Two Options

This event, as well as other situations that arise because it's so easy for users to move things to the cloud on their own, can be handled internally in two ways: administratively and technologically.

Administratively, I suggested that the vice president of sales tell his team that whoever uploaded the file must remove it, because it put the organization at risk. I also suggested that our vice president of marketing and public affairs or our legal counsel send a stern message to the entire workforce, stressing the importance of obtaining approval from marketing or public affairs before releasing any nonpublic data to the Internet. Luckily, I've already included these scenarios in a mandatory security awareness training module I recently released.

Technologically, I don't have much to work with, given our current budget and resource constraints, but I will enable URL content filtering rules on our new Palo Alto Networks firewalls to block access to any personal storage sites, with appropriate exceptions. I know that doing this will have a business impact, since certain departments use these sites to disseminate training materials and marketing and sales information to the public. It will take quite a bit of time to minimize the business impact.

The other issue with URL filtering is that it isn't in effect when an employee goes off our network. Of course, laptops can be configured to force all network traffic over a VPN, and software can push URL content filtering rules to each laptop, but those are the sorts of things we can't afford to do. I have data leak prevention in my budget for 2012, and that will help prevent nonpublic data from leaving the company.

But without solid technical controls, we will have to rely on stern words and employees' sense of responsibility. ◆

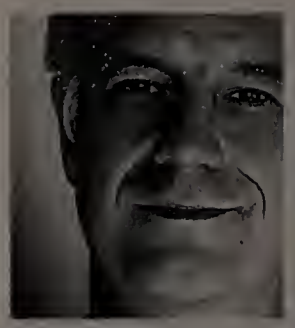
This week's journal is written by a real security manager, **"Mathias Thurman,"** *whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com.*

Trouble Ticket

» [redacted] A confidential product presentation is available on the Web.

» [redacted] Get it off the Internet, and find ways to prevent that sort of thing from happening.

"Things like this are inevitable in an era of proliferating social media and cloud-based data sharing and storage.



BART PERKINS

Ensuring Project Success

> Even aggressive plans can succeed if they are grounded in reality.

PROJECT PLANS SOMETIMES GO OFF THE RAILS. That's always been the case, and with the perfection of the human race nowhere on the horizon, it will remain true. But we can reduce the number of projects that fail.

While many factors affect project success, failed projects often stem from flawed plans that don't address basic constraints. When it comes to IT, plans must account for constraints in these areas:

Specialized skills. Plans must consider the availability of high-demand skills. One Fortune 500 retailer intended to rebuild almost every application in its portfolio. Initially, the plan appeared aggressive but achievable. Deeper analysis revealed significant staffing flaws. Nine key people (including architects and project managers) were each assigned full time to more than one project. Avoid this by checking staff availability against other project commitments, even if specialized skills are required for just a limited time. This sounds obvious, but it's too often ignored.

Culture. Plans must accommodate an organization's distinctive culture. A global enterprise with hundreds of small, autonomous offices failed to address field office independence when rolling out a corporate help desk. Field offices, which had always relied on overworked but responsive local IT staffers, saw no value in the new help desk and disregarded it. Finally, this culture of autonomy was acknowledged and addressed by giving local IT staffs the power to decline requests if the problems had not been reported to the global help desk. Project planners ignore organizational culture at their peril.

Delivery capability. Every IT organization has limitations imposed by infrastructure. One Fortune 500 food manufacturer decided to switch from a direct sales force to brokers, while simultaneously changing both its product mix and its credit terms. Unfortunately, its homegrown systems were old, inflexible and poorly documented. The planning team refused to include IT improvements, despite IT's protests. All changes were implemented concurrently, overwhelming the IT systems as predicted. Unable to take orders or ship products for six weeks, the company nearly went out of business.

Budgets. Plans that ignore budget constraints are doomed. One CIO was required to undertake eight major projects in parallel, though he lacked enough project managers. His requests to hire additional staff or to delay several projects were denied. IT staffers are now demoralized, developing a plan they don't believe is feasible; many are exploring other employment opportunities.

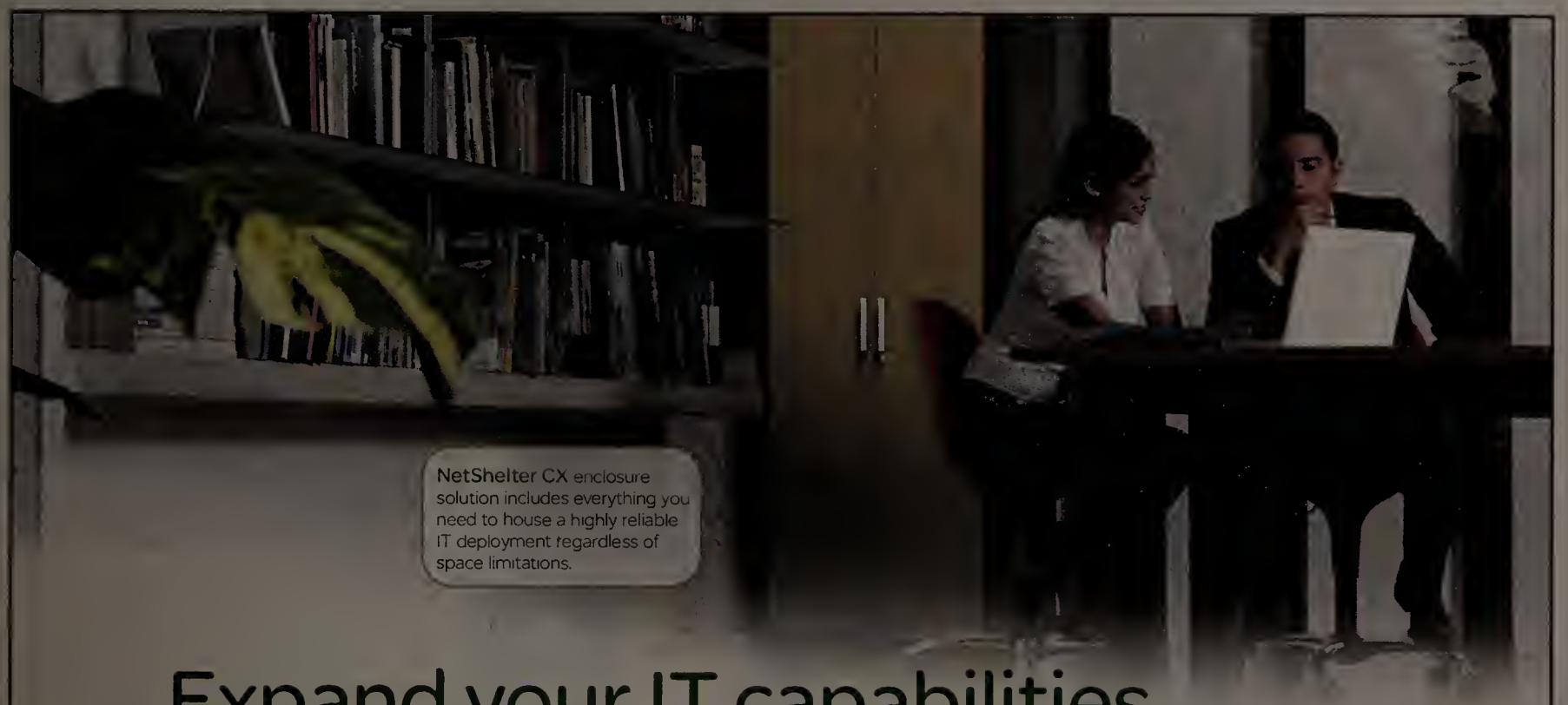
Flawed plans are often the result of corporate weaknesses. Management pressure is one of the most common weaknesses. That's what led Enron executives to publicly discuss revenue and profit plans that were eventually revealed as fraudulent.

Inexperience is another culprit. Planning teams need enough seasoned participants to ensure that schedules are realistic and that constraints and risks are taken into account.

Deadline-induced carelessness can also play a part. The planning team at the Fortune 500 retailer was under significant time pressure. As the workdays got longer and the deadline approached, communications among the sub-project teams decreased, and the aggregate project plan was not sufficiently cross-checked for inconsistencies.

Even aggressive plans can succeed if they are grounded in reality. But the bolder the plan is, the less room there is for error. Undetected planning flaws lead to failure. ◆

Bart Perkins is managing partner at Louisville, Ky.-based Leverage Partners, which helps organizations invest well in IT. Contact him at BartPerkins@LeveragePartners.com.



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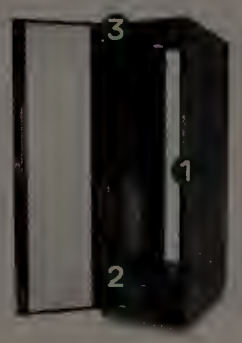

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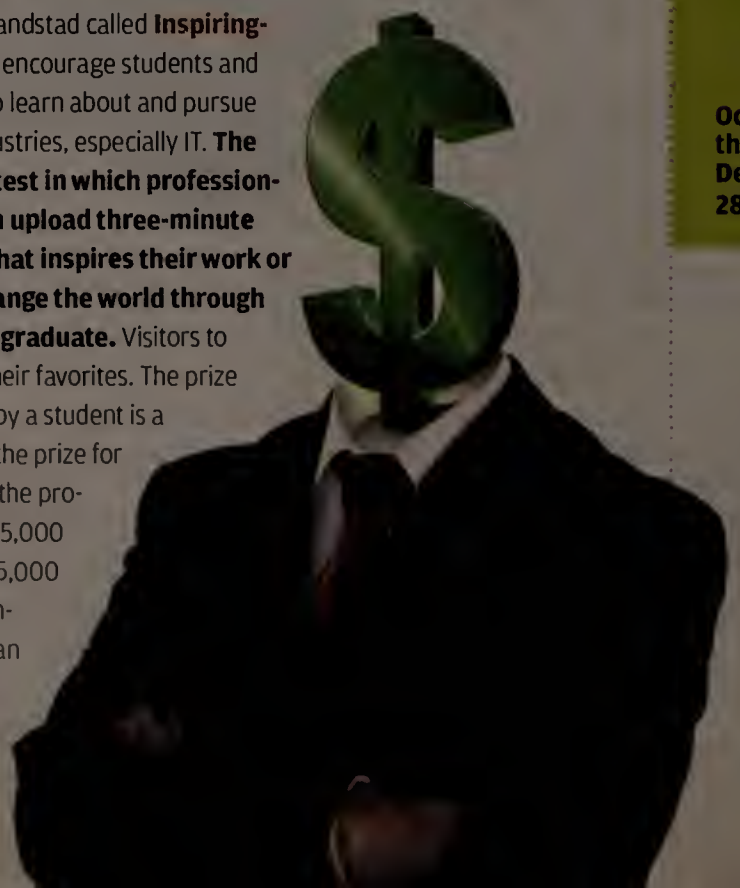
Career Watch

A New Job App

The smartphone job-app market just got more interesting for IT professionals, with Dice's announcement that it is offering free apps through Google's Android Marketplace and Apple's App Store. Dice says that the mobile apps will let users search among more than 80,000 technology jobs using keywords and GPS location data, apply for jobs by accessing résumés and cover letters from Dice accounts, share job opportunities with colleagues via email, learn about the latest hiring trends and technology news, and discover relevant career advice tailored to technology professionals.

Recruit for IT AND WIN MONEY

A new website from Randstad called **InspiringExperts.com** aims to encourage students and young professionals to learn about and pursue careers in growth industries, especially IT. **The site is holding a contest in which professionals and students can upload three-minute videos explaining what inspires their work or how they plan to change the world through their jobs once they graduate.** Visitors to the site can vote for their favorites. The prize for the winning entry by a student is a $10,000 scholarship; the prize for the top vote-getter in the professional category is $5,000 in cash and another $5,000 for a charity of the winner's choice. Videos can be submitted through Dec. 15, and voting ends on Jan. 1.



'Tis the Season TO CALL IN SICK

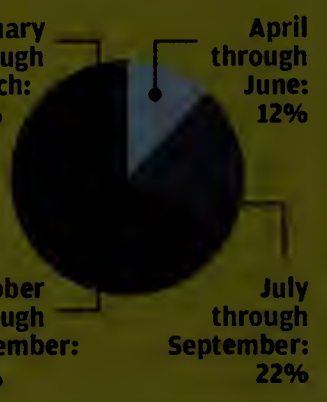
HERE'S A SHOCKING PIECE OF NEWS: Employees aren't always telling the truth when they call in sick.

In fact, in a survey that Harris Interactive conducted for SoloGig, 34% of U.S. IT workers admitted that they had used a fake excuse when they called in sick during the past year.

SoloGig, a division of CareerBuilder that runs an employment site for consultants, surveyed more than 170 IT employers and 293 IT workers at the end of the summer on the topic of absenteeism.

When IT Workers Go Missing

While employers reported heightened absenteeism around the holidays, they said the prime season when IT employees call in sick is the first quarter:



One finding was that employers expect more IT absenteeism as the year winds down, with 36% reporting that workers call in sick more often during the winter holidays. But that isn't the period that most managers cited as the peak of absenteeism (see pie chart).

The survey also found that sending an email is now as likely a means of "calling in" sick as using the phone. Some IT employees said they have texted in the news that they won't be at work, but they're still in the minority.

SoloGig also asked the IT managers about unusual excuses they had heard for not showing up at work. Some of the excuses don't really sound all that odd (depending on where you live, getting bitten by a deer might not be considered unusual, especially during hunting season). **But some of the excuses do stand out, either as great misfortunes or as examples of acute creativity.** Here are a few examples:

- One employee said she was at a coffee shop when a truck backed up and dumped a load of flour into her convertible.
- Another hurt his back chasing a beaver.
- A third complained of coming down with a headache after going to too many garage sales.

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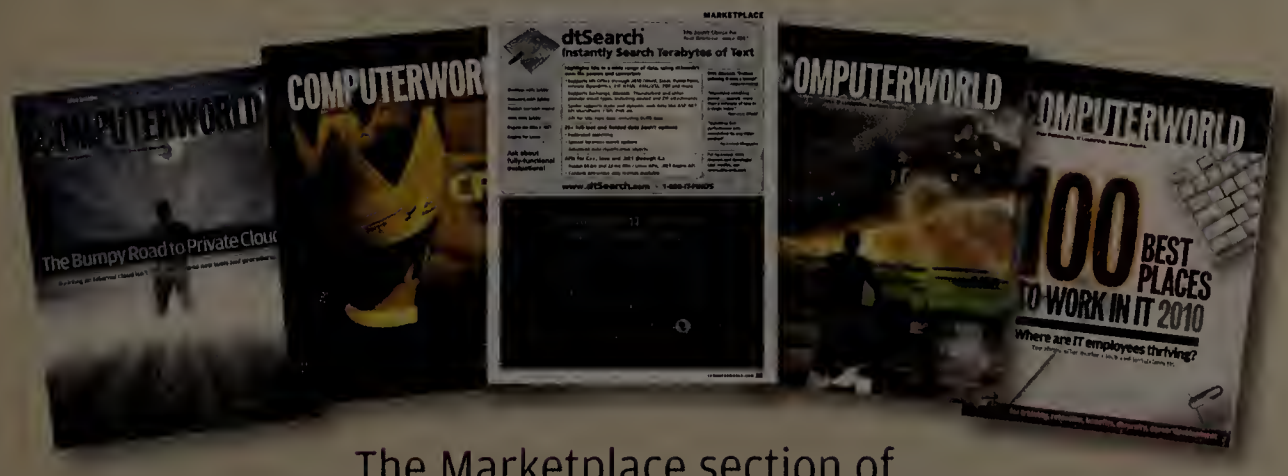

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Source: *Harvey Ad Measurement Study, Computerworld May 10, 2010

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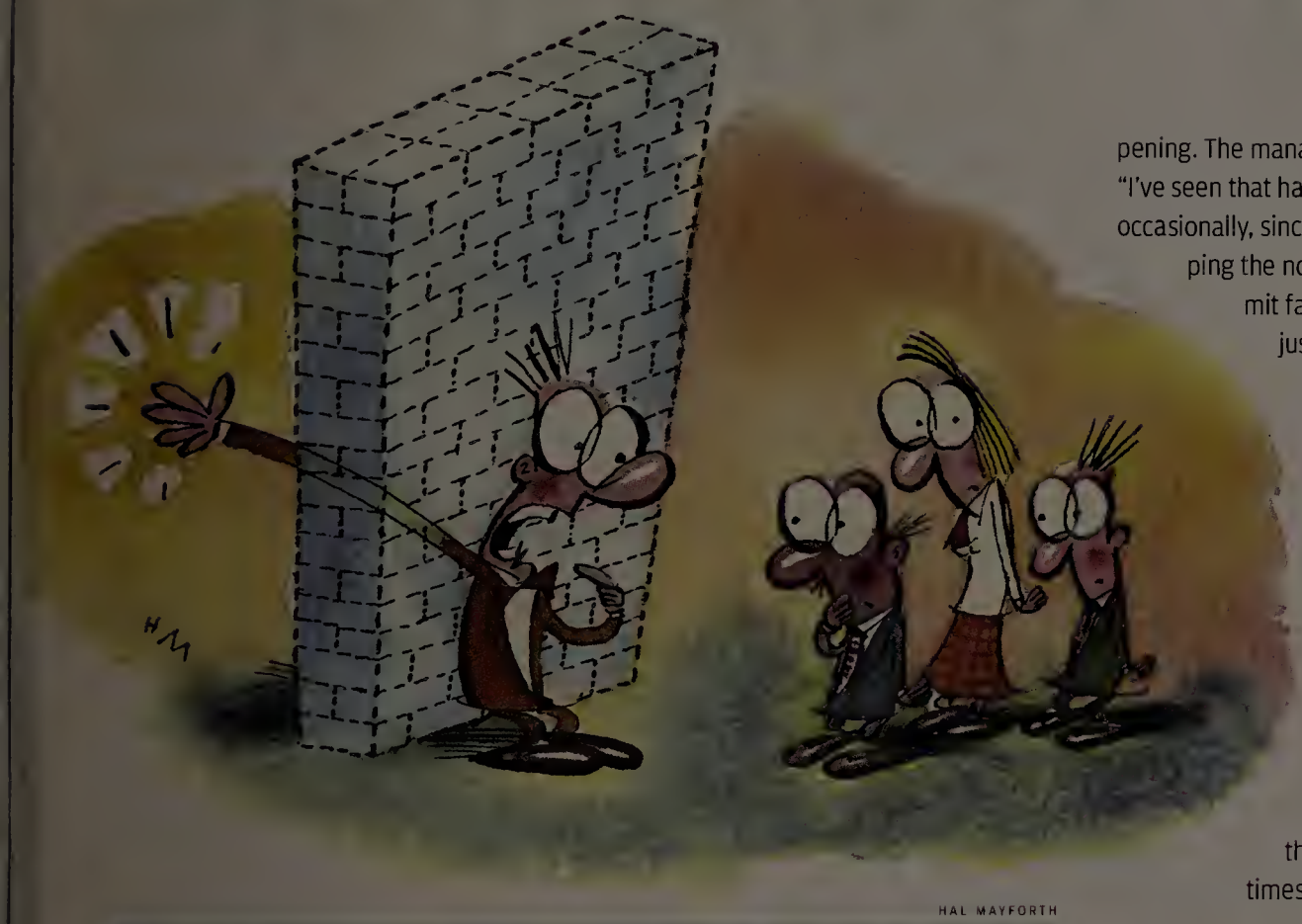

HAL MAYFORTH

You're Right. Now Go Away!

At this big utility, there's the regular IT department, says a pilot fish working there – and then there's IT security. "The IT security department is super secret, super special – all-knowing and all-seeing," says fish. "And we literally have reams of security documentation, rules and regulations. This company ran everything off of PeopleSoft HR software, and we had strict rules on password changes. They were touting all the security and how it protects them and us, blah, blah, blah...."

Then one day, I demonstrated to them how 'secure' PeopleSoft is when you serve it from HTTP instead of HTTP Secure. Yes, they had 10,000 employees accessing PeopleSoft through HTTP – 10,000 user passwords in clear text all day long! They decided to upgrade their PeopleSoft servers to HTTPS. And they told me to shut up and mind my own business."

At Least He Didn't Say It's a Feature

This software vendor makes a product that interfaces with another commercial package to send faxes out for bids, quotes and invoices, reports a pilot fish working there. "I get a call in support from someone in the quality assurance department saying that they have accidentally sent 200 test faxes and that those faxes need to be killed," fish says. He logs in to the relevant server as an administrator, breaks out to the command prompt and starts trying to kill the fax jobs manually – but every time, it tells him he can't. Finally he goes to the manager of the programming department and describes what's happening. The manager's response: "I've seen that happen before occasionally, since we started skipping the normal way to submit faxes and started just dropping the incoming fax directly to the fax program's API." Any plans to fix this bug? fish innocently asks. "Oh, it's not a bug," manager reassures fish. "It's just something that sometimes happens."

Why We Love Conference Calls

Pilot fish is on a long conference call, battling a major application that is having performance problems. "Forgetting that these calls might be monitored by nontechnical types, I decided to relieve some of the tension," says fish. "I quipped, 'We should set the Run Faster parameter to true.' Everyone had a good laugh, and the call went on into the night. The next day, my manager called me into his office. It seems there was a senior executive who was lurking on the call without announcing his presence. He called my manager's boss to rip him for us not setting the special parameter to true and solving the performance issue. I am now more careful of what I say on these calls."

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OPINION

JOHN HALAMKA

The New Metrics For CIO Success

> Modern CIOs must think more like CEOs about business needs and future strategies.

John Halamka is CIO at CareGroup Healthcare System, CIO and associate dean for educational technology at Harvard Medical School, chairman of the New England Health Electronic Data Interchange Network, chairman of the Healthcare Information Technology Standards Panel and a practicing emergency physician. You can contact him at jhalamka@caregroup.harvard.edu.

WHEN I BEGAN MY CAREER as a CIO in 1997, success was defined by the basics: email delivery, network connectivity and application functionality. I personally wrote code, experimented with new operating systems and created novel analytics.

In 2011, CIO success is much more complex.

Infrastructure success can be defined as 99.99% uptime of all systems and no loss, corruption or breach of data. This is very hard to achieve, and the cloud sets expectations that IT infrastructure should be like heat, power, and light — available when needed, in the amount required.

Application success can be defined as the delivery, on time and on budget, of "go lives" according to project plans. Two important forces make this more complicated. One is the rise of consumer app stores, which set expectations that enterprise software should be easy to find, procure and install. The second is that, as the economy forces downsizing, there's more pressure on the IT department to quickly deliver applications that provide better workflow automation and thus the improvements in efficiency the organization needs when it's scraping by with fewer employees.

This all sounds impossible. Deliver massive infrastructure in an environment of constant change, but keep it entirely reliable and secure. Deliver applications that support business processes in increasingly short time frames with limited resources — both within the IT department and among the business owners of those processes.

Modern CIOs are not technologists or evangelists for innovation, but customer relationship managers, strategic communicators and project managers, delicately balancing project portfolios, available resources and governance.

Modern CIOs have little time to get infrastructure and applications right. They must think more like CEOs about business needs and future strategies, and they must act more like Wayne Gretzky (who skated not where the puck was, but where it was going to be), to ensure that critical information technology is deployed by the time it is needed.

What am I doing in fiscal 2012 to become a more effective modern CIO? Three things:

1. I'm identifying key business customers and meeting with each one to make sure their priorities are reflected in the current IT operating plan and the five-year IT strategic plan. Working with the governance committees, I will trim the list of priorities to just those projects that have the greatest impact on business strategy, quality and efficiency.

2. I'm standardizing communications so key customers receive monthly updates about their priority projects.

3. I'm defining a process for managing IT projects across the enterprise. It includes standardizing the IT project intake process, the IT project life cycle and project management tools (project documentation, project plans and status reports).

I hope that by focusing on customer relationship management, communication and project management, I will create a positive working environment for the IT staff, with a manageable set of well-defined projects and engaged customers. Doing a few projects swiftly and in greater depth to meet the most critical needs of the business is much harder than agreeing to do many niche projects and moving slowly on all of them.

CIOs should be judged on their ability to manage demand and achieve reasonable levels of customer satisfaction while focusing on a narrower project portfolio and delivering it at a faster pace. ◆

SOLVE *the* PROBLEM

HINT: REFLECT UPON IT A BIT

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